NOAA
R 225
FR
13
FR
7

GENERAL NOTES:

1. THE VESSEL SHALL BE CLASSIFIED UNDER ABS MALTESE CROSS A1, CIRCLE E, UNRESTRICTED SERVICE AND ICE CLASS C0.
2. ALL PLATING SHALL BE ALUMINUM 5086–H116, UNLESS OTHERWISE NOTED. ALL SHAPES SHALL BE ALUMINUM 5086–H111, UNLESS OTHERWISE NOTED.
3. WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE NOAA "STATEMENT OF REQUIREMENTS" AND ACCEPTABLE COMMERCIAL MARINE QUALITY.
4. ALL WELDING SHALL BE IN ACCORDANCE WITH ABS RULES.
5. STIFFENER AND GIRDER END CONNECTION DETAILS SHALL BE IN ACCORDANCE WITH HMI STANDARDS, REFERENCE NO. 10.
6. STIFFENER AND GIRDER END CONNECTIONS SHALL BE DESIGNATED AS FOLLOWS:
   "EC–S": CUT MEMBER ONE INCH SHORT
   "EC–W": WEB IS CONNECTED
   "EC–F": FULL CONNECTION – WEB AND FLANGE STRENGTH MAINTAINED.
   "EC–A": EFFECTIVE BRACKET PER ABS RULES, PART 3, SECTION 2.5.3
7. UNLESS OTHERWISE NOTED, ALL END CONNECTIONS SHALL BE "EC–F".
8. COPES, SNIPES AND DRAINS SHALL BE IN ACCORDANCE WITH HMI STANDARDS, REFERENCE NO. 4.
9. PLATES AND SHAPES ARE IN IMPERIAL UNITS. DIMENSIONS ARE IN METRIC UNITS.
10. FRAME SPACING = 600 mm.
11. UNLESS OTHERWISE NOTED, TRANSVERSES SHALL HAVE FITTED CONNECTIONS THROUGH GIRDERS.
12. GIRDERS SHALL BE FITTED WITH TRIPPING BRACKETS AT 3 m OR MAX. OF 5 FRAME SPACINGS.
13. PORT AND STARBOARD ARE SIMILAR UNLESS OTHERWISE NOTED.
14. ABBREVIATIONS ARE IN ACCORDANCE WITH ASME Y14.38.
15. LOCAL STRUCTURAL DETAILS SUCH AS SMALL INSERTS, HEADERS AND STIFFENER END CONNECTIONS ARE NOT SHOWN IN ALL LOCATIONS. SEE SPECIFICATIONS FOR REQUIREMENTS.
16. FOR CLARITY, ONLY STANCHIONS BELOW DECKS ARE SHOWN. O INDICATES STANCHIONS BELOW DECK.
17. ALL STRUCTURE REPRESENTS ABS NOMINAL SCANTLINGS WITH THE EXCEPTION OF THE 02 LVL DECK 250 PSF DESIGN LOAD FWD OF FR 22.
18. INDICATES DECK ELEVATION DROP.
19. FILLET WELD SIZES TO BE 100% EFFICIENT IN ACCORDANCE WITH MIL–STD–1628 (SHIPS) OR EQUAL.

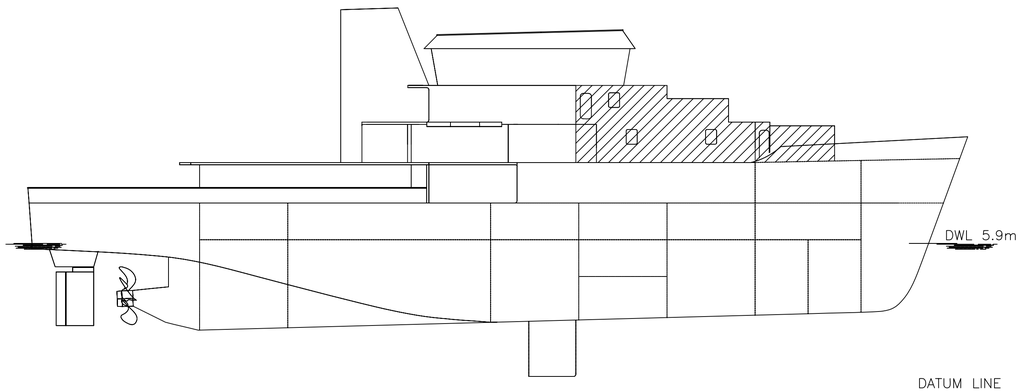
FUME–TIGHT (FT) BULKHEAD DETAILS

LOCATION	ORIENTATION	STIFFENER SPACING (mm)	PLATE THICKNESS (in)	STIFFENER TYPE	END CONN. TOP	END CONN. BOTTOM
01 LEVEL	TRANSVERSE	625	1/4"	3" X 2" X 1/4" L	S	S
01 LEVEL	LONG	600	1/4"	3" X 2" X 1/4" L	S	S

REVISIONS

REV	ZONE	DESCRIPTION	DATE	APPROVED
1		1. SH 1: EXTENDED HULL APPLICABILITY TO INCLUDE HULL 1956. 2. SH 2, SECTION 9–A: REVISED VERTICAL HEIGHT DIMENSIONS OF LOUVER COUTOUT FROM 160 TO 206 AND 1035 TO 1080. 3. SH 2, PLAN 11–A: CHANGED WEB DEPTH OF BUILT–UP TEE FROM 15" TO 18". 4. SH 2, SECTION 11–D: REVISED AND ADDED BRACKET DETAILS. 5. SH 3, ELEVATION 19–A: REVISED VERTICAL HEIGHT DIMENSIONS OF LOUVER COUTOUT FROM 160 TO 206 AND 885 TO 930. ITEM 1 PER ENGINEERING DEVELOPMENT. ITEMS 2 THRU 5 PER PRODUCTION DESIGN	4/4/05 AGE	4/7/05 FH
2		1. SH 1: EXTENDED HULL APPLICABILITY TO INCLUDE HULL 1957. 2. SH 1: THIS REVISION REFLECTS AS–BUILT CONDITIONS FOR HULL 1953. ITEM 1 & 2 PER ENGINEERING DEVELOPMENT	8/11/06 MDP	

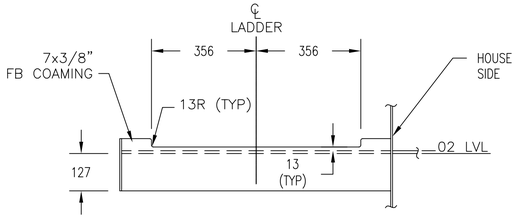
AS–BUILT 2 2



KEY PLAN

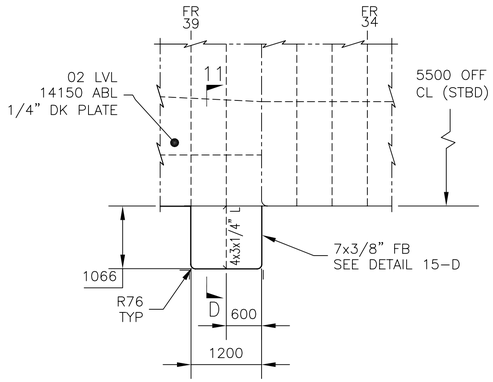
DOCUMENT DISTRIBUTION RECORD

| | | |



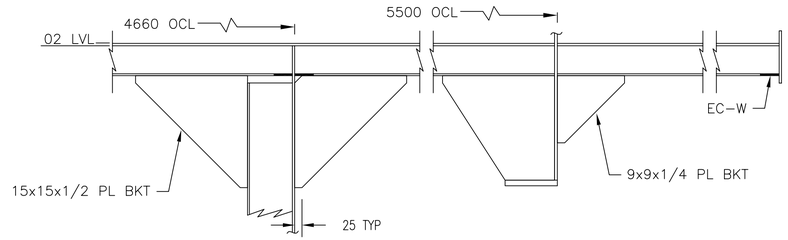
DETAIL 15–D

TYP COAMING CUTOUT IWO INCLINED LADDER
SCALE: 1:10



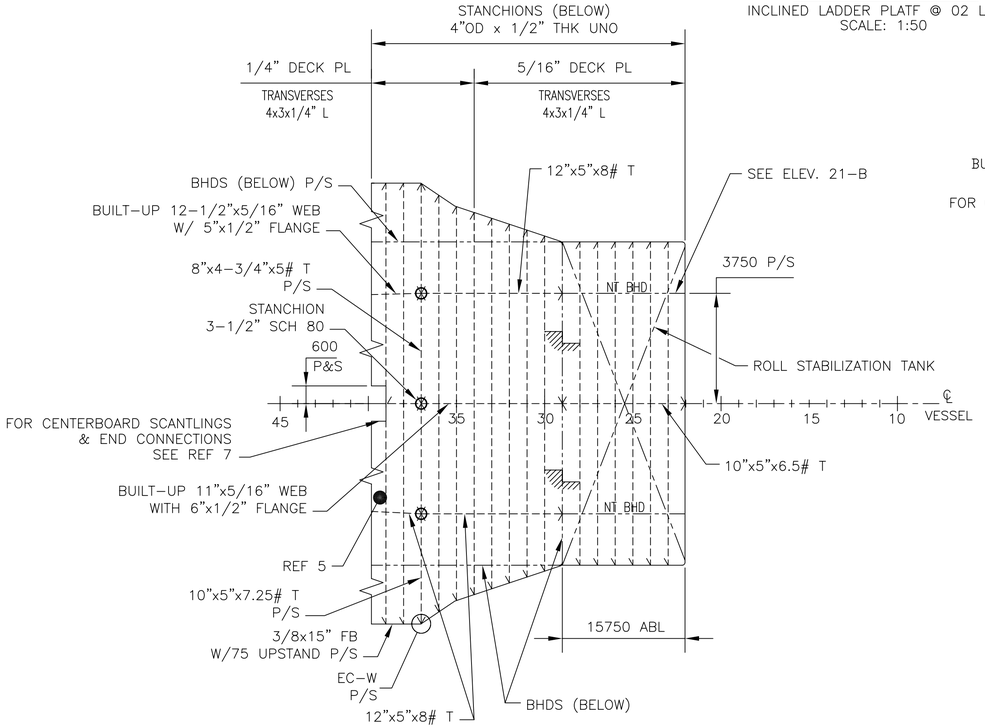
DETAIL 13–C

INCLINED LADDER PLATF @ 02 LEVEL
SCALE: 1:50



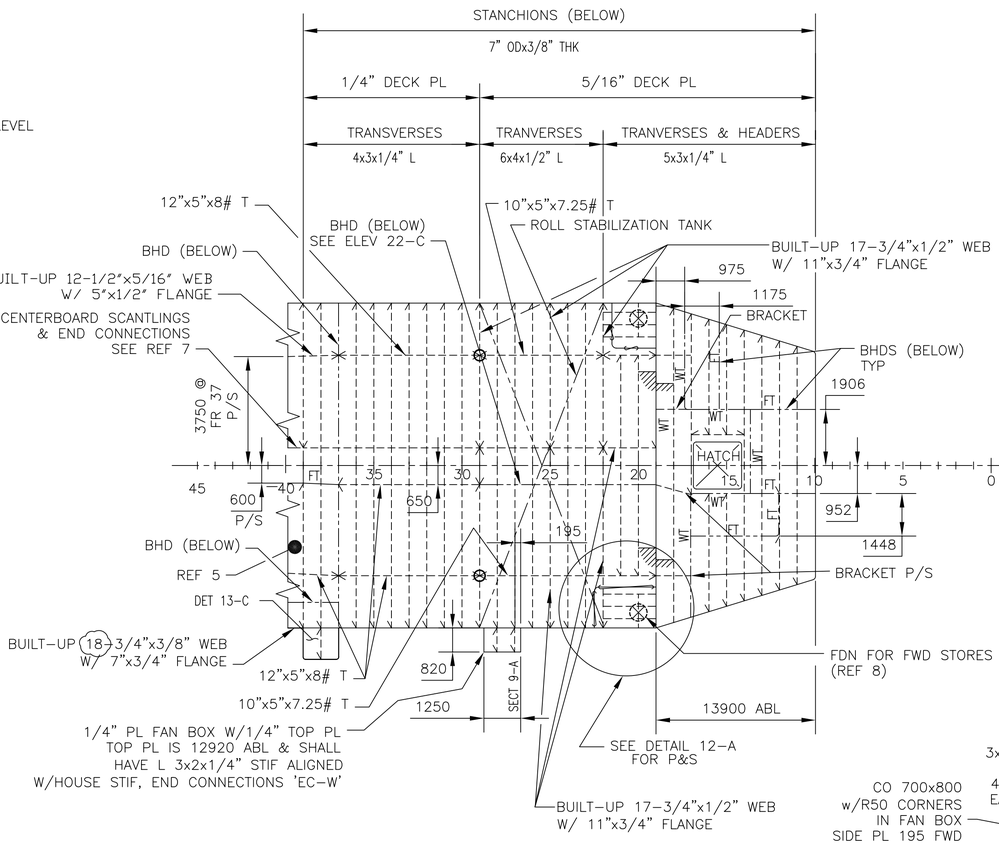
SECTION 11–D △4 1

FRAME 38 LKG FWD
SCALE: 1:10



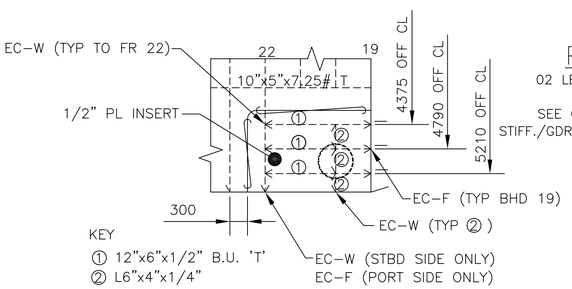
PLAN 14–A

03 LEVEL – 16650 ABL U.N.O.
FR. 22 – FR. 39
SEE GENERAL NOTE 8 AND 12.
STIFFENER & GIRDER END CONNECTIONS 'EC–F' UNO



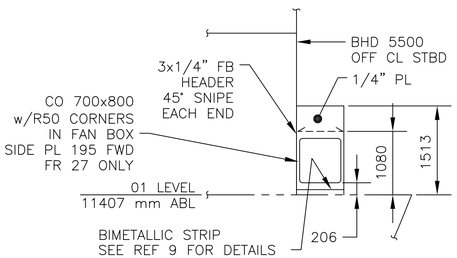
PLAN 11–A △3 1

02 LEVEL – 14150 ABL U.N.O.
FR. 10 – FR. 39
SEE GENERAL NOTE 8 AND 12.
STIFF./GDR END CONNECTIONS 'EC–F' UNO



DETAIL 12–A

SCALE:–1:50



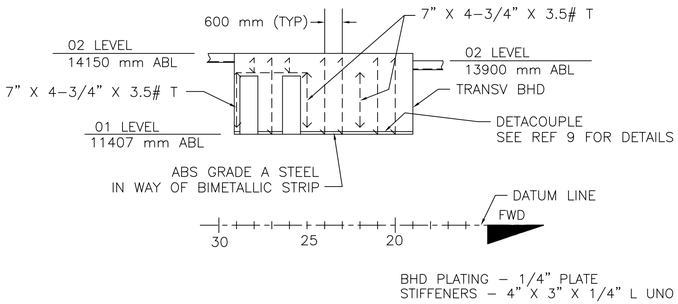
SECTION 9–A △2 1

195 FWD FR 27 &
145 FWD FR 29 LKG FWD
SCALE:–1:50

DWG NO. M282–100–FH11 SH 2

HULL NO	CAGE CODE	SIZE	JOB NO.	ITEM	DELIVERABLE	SHEET	REV
1953	3B213	D	M282	100	FH11	002	01
ESTIMATE NO	SCALE		FILE			SHEET 2 OF 3	
00–104	1:100						

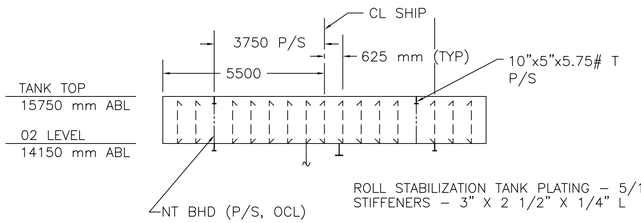
PLOT: 1=100



BHD PLATING – 1/4" PLATE
STIFFENERS – 4" X 3" X 1/4" L UNO

ELEVATION 22–C

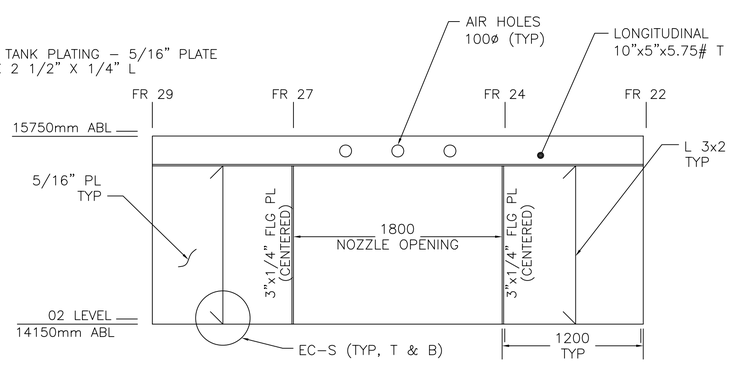
LKG INBD AT 650 mm OFF CL (STBD)
SCALE= 1:100
STIFFENER & GIRDER END CONNECTIONS 'EC–F' UNO



ROLL STABILIZATION TANK PLATING – 5/16" PLATE
STIFFENERS – 3" X 2 1/2" X 1/4" L

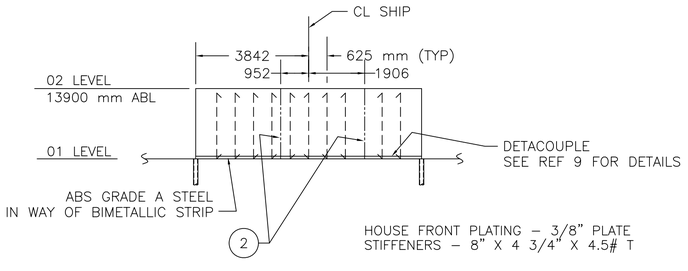
SECTION 22–B

LKG AFT AT FR 22
SCALE= 1:100
STIFFENER & GIRDER END CONNECTIONS 'EC–F' UNO



ELEVATION 21–B

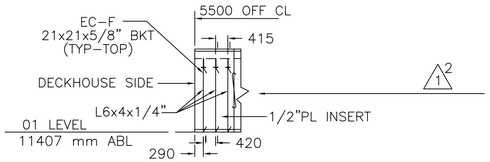
NT BHD/NOZZLE PLATE 3750 OFF CL
PORT LKG OUTBD; STBD SIM
SCALE= 1:25



HOUSE FRONT PLATING – 3/8" PLATE
STIFFENERS – 8" X 4 3/4" X 4.5# T

SECTION 22–A

LKG AFT AT FR 10
SCALE= 1:100
STIFFENER & GIRDEER END CONNECTIONS 'EC–F' UNO

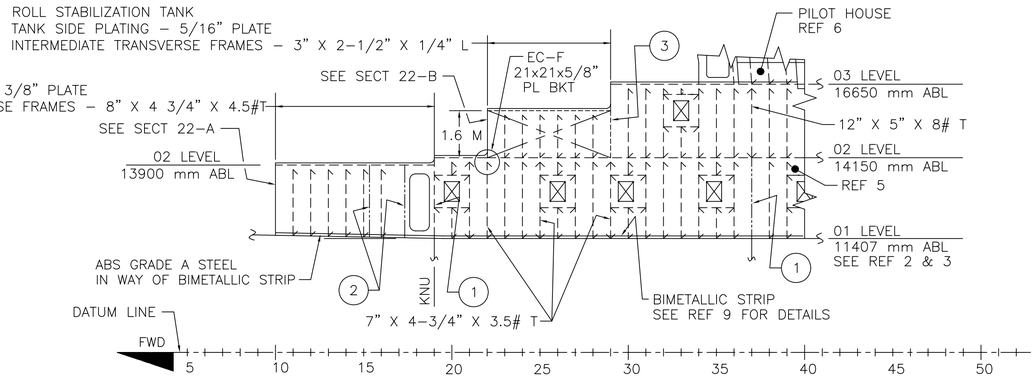


ELEVATION 19–D

PART BHD 19 – PORT SIDE LOOKING FWD
STBD SIMILAR & OPPOSITE

ID	STIFFENER SPACING (mm)	PLATE THICKNESS (IN)	STIFFENER TYPE
1	625	1/4"	4" X 3" X 1/4" L *
ON WT BHD 19 @ 4375,4790 & 5210 OFF CL P&S			L6x4x1/4"
2	625	1/4"	3" X 2" X 1/4" L
3	625	5/16"	4" X 3" X 1/4" L

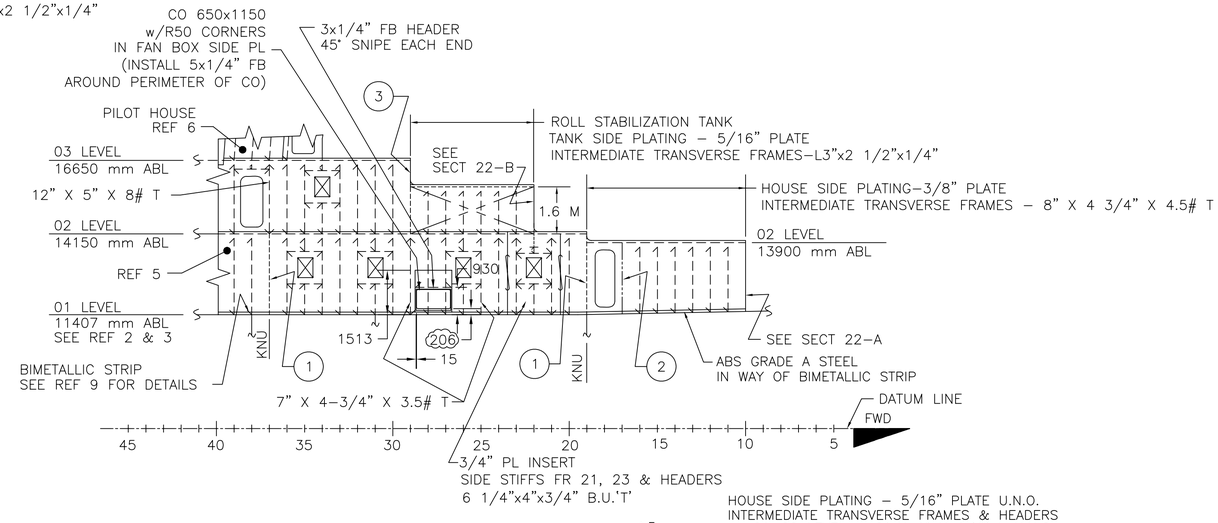
* NOTE: IN WAY OF PILLARS, BULKHEAD STIFFENERS SHALL BE 6" X 3 1/2" X 3/8" L.



HOUSE SIDE PLATING – 5/16" PLATE U.N.O.
INTERMEDIATE TRANSVERSE FRAMES & HEADERS
01–02 LEVEL – 6" X 4" X 1/4" L U.N.O.
02–03 LEVEL – 4" X 2" X 1/4" L U.N.O.

ELEVATION 19–C

HOUSE SIDE – PORT
SCALE= 1:100
STIFFENER & GIRDER END CONNECTIONS 'EC–F' UNO



HOUSE SIDE PLATING – 5/16" PLATE U.N.O.
INTERMEDIATE TRANSVERSE FRAMES & HEADERS
01–02 LEVEL – 6" X 4" X 1/4" L U.N.O.
02–03 LEVEL – 4" X 2" X 1/4" L U.N.O.

ELEVATION 19–A

HOUSE SIDE – STARBOARD
SCALE= 1:100
STIFFENER & GIRDER END CONNECTIONS 'EC–F' UNO

DWG NO. M282–100–FH11 SH3

HULL NO	CAGE CODE	SIZE	JOB NO.	ITEM	DELIVERABLE	SHEET	REV
1953	3B213	D	M282	100	FH11	003	01
ESTIMATE NO	SCALE		FILE			SHEET 3 OF 3	
00–104	AS NOTED						

PLOT: 1=100